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Patent claims

1. A semitrailer train comprising a towing vehicle (2), a semitrailer (3) and a fifthwheel (4) which has a coupling part (5) which is assigned to the towing vehicle (2) and a coupling part (5) which is assigned to the semitrailer (3) which have the purpose of forming a mechanical connection between the towing vehicle (2) and semitrailer (3), a control device (10) for controlling components (9) of the semitrailer (3) being provided in the towing vehicle (2) and the semitrailer (3) having data lines (17) for transmitting the control data and power supply lines (16) for supplying power to the components (9), the coupling part which is assigned to the towing vehicle (2) being a fifthwheel pickup plate (5) and the coupling part which is assigned to the semitrailer (3) being embodied as a kingpin (6) which matches said coupling part, characterized in that a voltage generator for generating a periodically fluctuating carrier signal is provided in the towing vehicle (2), in that a signal modulator (12) modulates the control data onto the carrier signal, and in that a transformer coil (7) is arranged in the fifthwheel pickup plate (5) of the towing vehicle (2) in order to transmit the carrier signal with the control data modulated onto it to a transformer coil (8) in the region of the kingpin (6) of the semitrailer (3), a demodulator (15) in the semitrailer (3) separating the total signal transmitted by inductive coupling into a carrier signal and the control data, and the control data being provided to actuate a component (9) in the semitrailer (3).

2. A semitrailer train comprising a towing vehicle (2), a semitrailer (3) and a fifthwheel (4) which has a coupling part (5) which is assigned to the towing vehicle (2) and a coupling part (5) which is assigned to the semitrailer (3) which have the purpose of forming a mechanical connection between the towing vehicle (2) and semitrailer (3), a control device (10) for controlling components (9) of the semitrailer (3) being provided in the towing vehicle (2) and the semitrailer (3) having data lines (17) for transmitting the control data and power supply lines (16) for supplying power to the components (9), the coupling part which is assigned to the towing vehicle (2) being a fifthwheel pickup plate (5) and the coupling part which is assigned to the semitrailer (3) being embodied as a kingpin (6) which matches said coupling part, characterized in that a voltage generator for generating a periodically fluctuating carrier signal is provided in the towing vehicle (2), in that a transformer coil (7) is arranged in the fifthwheel pickup plate (5) of the towing vehicle (2) in order to transmit the carrier signal to a transformer coil (8) in the region of the kingpin (6) of the semitrailer (3), the carrier signal which is transmitted by inductive coupling being provided as a power supply voltage for a component (9) in the semitrailer (3).

3. The semitrailer train as claimed in claim 1 or 2, characterized in that the semitrailer (3) has a rectifier which converts the transmitted carrier voltage into direct current so that the components (9) of the semitrailer (3) can be supplied with direct voltage.

4. The semitrailer train as claimed in claim 1 or 2,

characterized in that the transformer coil (7) in the fifthwheel pickup plate (5) of the towing vehicle (2) has a coil whose linear or curved longitudinal axis is arranged essentially parallel to the plane of the fifthwheel pickup plate (5).

5. The semitrailer train as claimed in claim 1 to 4, characterized in that the transformer coil (8) in the region of or inside the kingpin (6) of the semitrailer (3) is a further coil whose linear or curved longitudinal axis is arranged essentially parallel to the plane of the fifthwheel pickup plate (5) when the semitrailer train (1) is coupled.

6. A towing vehicle having a fifthwheel (4) which has a fifthwheel pickup plate (5) for forming a mechanical connection between the towing vehicle (2) and semitrailer (3), a control device (10) for controlling components (9) of the semitrailer (3) being provided in the towing vehicle (2), and data lines (11) being provided for transmitting the control data to the semitrailer (3), and power supply lines (14) being provided for supplying power to the components (9) of the semitrailer (3), characterized in that an alternating voltage generator for generating a carrier signal is provided in the towing vehicle (2), in that a signal modulator modulates the control data onto the carrier signal, and in that a transformer coil (7) is arranged in the fifthwheel pickup plate (5) of the towing vehicle in order to transmit the carrier signal with the control data modulated onto it to a transformer coil (8) in the region of a kingpin (6) of a semitrailer (3) in order to generate in the semitrailer (3) a carrier signal and control data for a component (9) in the semitrailer (3) from the signal which is

transmitted by inductive coupling.

7. A semitrailer for a semitrailer train (1) having a kingpin (6) which is suitable for coupling to a coupling part of a towing vehicle (2), it being possible to actuate components of the semitrailer (3) by means of a control device (10) of the towing vehicle (2), and the semitrailer (3) having data lines (17) for transmitting the control data, and power supply lines (16) for supplying power to the components (9), characterized in that a demodulator (15) which separates the total signal transmitted from the towing vehicle (2) by inductive coupling into an energy-carrying power supply voltage and the control data is provided in the semitrailer (3), the power supply voltage being provided to supply power to a component (9) in the semitrailer (3).